



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,596	04/06/2001	Alexandre El Homs	Trilog 6194	5687

7590 10/31/2005  
Samuels, Gauthier & Stevens LLP  
225 Franklin Street, Suite 3300  
Boston, MA 02110

EXAMINER

STERRETT, JONATHAN G

ART UNIT PAPER NUMBER

3623

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/828,596

Applicant(s)

HOMSI, ALEXANDRE EL

Examiner

Jonathan G. Sterrett

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 7, 9, 13, 15-17, 20, 21 and 24-30 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 18, 19, 5, 6, 8, 14, 10, 11, 12, 22, 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This **Final Office Action** is responsive to applicant's amendment filed August 16, 2005. The applicant amended **Claims 1, 17, 25, 26 and 29**. Currently **Claims 1-30** are pending.

#### *Response to Amendments*

2. **Claims 2, 3, 18 and 19; Claims 5, 6, 8 and 14; Claim 10, Claim 11, 12, 22 and 23** are all objected to for being allowable but dependent on a rejected base claim. **Claims 26 and 29; Claims 1, 4, 7, 9, 13, 15-17, 20, 21, 24, 25 and 28; Claims 27 and 30** are rejected under 35 USC 103.

#### *Response to Arguments*

3. The applicant's arguments have been fully considered, but they are not persuasive.

The applicant argues on page 14 that Chatterjee fails to disclose the limitation of the workflow system exchanging data with one or more sources **external to the organization** (emphasis added) in a network. The examiner respectfully disagrees. The amended limitation of the claim '**external to the organization**' does not add sufficient structure to the claim to distinguish this limitation over the prior art and what is known in the art by one of ordinary skill, in this case the prior art being Chatterjee. The structure of a network is not defined by being internal or external to an organization, unless other structural elements define it as such. For example, if a claim limitation describes "**placing a telephone call outside an organization**", then the limitation "**outside an**

Art Unit: 3623

**organization**” does not add any patentable structure to the claim, since the telephone call could be made to someone in the next room or across continents. However, if the claim limitation describes “**placing a telephone call outside of a particular building**”, then the geographic limitations of the building define where the call is placed. Because the amended limitation of “**external to the organization**” does not add patentable structure to the claimed network, one of ordinary skill in the art would not be able to distinguish this claim limitation from the cited prior art and what is old and well known in the art, namely Chatterjee.

The applicant argues on page 16 that Aspen’s workflow process software and optimizer is not really a workflow process at all, but rather “**an integrated engineering work process**” and that the optimization functionality disclosed by Aspen applies to “**engineering process step analysis**” and not to “**work flow process analysis**”. Again the examiner respectfully disagrees. The Aspen reference page 1 paragraph 2 line 11-13 teaches that it “**captures process knowledge**” and provides “**better engineering decisions**” through the “**automation of engineering tasks**”. The examiner maintains that this description clearly defines the Aspen software as providing workflow functionality and thus being a workflow system. The automation of the engineering process with the automation of tasks and improvement in decisioning clearly categorize the Aspen software offering as workflow software.

Given that the RT-Opt provides real time optimization of plant operations (i.e. a workflow process), it follows that real time optimization requires real time analysis, since optimization requires analysis.

Art Unit: 3623

Assuming arguendo that the RT-Opt did not provide real time optimization (and thus analysis) of a work flow process as defined, the question remains whether one of ordinary skill in the art would have the motivation to combine it with the workflow process described in Chatterjee. Since Chatterjee and Aspen in this case would be analogous art (both providing workflow systems) and Aspen describes optimizing a process, then one of ordinary skill in the art would combine the workflow process of Chatterjee with the optimization functionality provided by Aspen with the realistic expectation of optimizing and analyzing in real time Chatterjee's workflow process.

In further response to applicant's arguments against the references individually, specifically Aspen, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Lastly, the applicant's conclusion at the bottom of page 16 continuing to the top of page 17 addresses the prior art of "Alpine" rather than the art of record of "Aspen". The examiner assumes that this is a typo since there is not and has not been any "Alpine" art of record, rather Aspen. Nonetheless, these remarks are addressed above.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3623

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 26 and 29** under 35 U.S.C. 103(a) as being unpatentable over **Chatterjee US 5,774,661**.

Regarding **Claim 26**, Chatterjee discloses:

**a workflow design area to design a workflow process, said workflow process comprising one or more workflow process segments,**

Figure 3 #313, #314, #315 are workflow process segments in a workflow design area. This view shows how a workflow process may be built using workflow segments.

**said segments comprising at least one remote workflow process segment for exchanging data with one or more sources, and**

Figure 3 #318, in this example a database retrieval step is listed. Figure 2 illustrates the network where the desktop GUI, #213 can interact through an API layer, #250, through the network #150 to a database server, #222.

**a properties panel to manipulate one or more properties associated with said one or more workflow process segments.**

Figure 3 #351-#370 illustrate a properties panel to manipulate several properties associated with the workflow segments illustrated, in this case for "purchase order entry".

Art Unit: 3623

Chatterjee does not teach where the data is exchanged with sources **external to the organization in a network.**

However, Official Notice is taken that it is old and well known in the art of networking for data to come from sources that are external to an organization. A good example of this are corporations which use objects in a network that exchange data with one or more sources from the internet. Being connected to and receiving data from the internet allows corporations to improve the efficiency of communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Chatterjee regarding providing workflow capabilities, to include the step of exchanging data with sources external to an organization in a network, because it would improve the efficiency of communication.

**Claim 29** is rejected under the same rationale as **Claim 26** above, therefore the same rejection applies.

6. **Claims 1, 4, 7, 9, 13, 15-17, 20, 21, 24, 25 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chatterjee US 5,774,661** in view of **Aspen Technology (Aspen)** "Aspen Engineering Suite" software product as referenced in the following document:

Art Unit: 3623

Business Wire, "Aspen Technology Introduces Aspen Engineering Suite",  
May 1998, pp.1-4.

Regarding **Claim 1**, Chatterjee teaches:

**a workflow segment designer creating one or more workflow steps  
defining a set of routing rules for one or more resources that trigger said  
workflow steps;**

Column 3 line 60-63, workflow builder defines the steps, rules and  
operations of a workflow.

Column 5 line 51-52, workflow menu is used to set up, define new  
workflows including workflow steps.

Column 6 line 58 & line 61-62, distribution points, as defined by the flow  
control menu in the designer, allows multiple resources to work on an item in  
parallel. These items are triggered to the resource when the user activates the  
workflow step through the use of workbaskets.

Column 14 line 63-65, rule engine automates workflow routing in  
accordance with conditional relationships, including resources triggering workflow  
steps.

**a sub-flow designer creating one or more sub-flow processes, said  
sub-flow processes incorporating one or more of pre-existing internal  
workflow processes;**



Art Unit: 3623

Column 3 line 60-63, workflow builder defines the steps of a workflow, including those steps which incorporate one or more pre-existing internal workflow processes.

Column 5 line 58-60, the command 'open' is used to control access to existing workflows, including to incorporate those into the creation of sub-flow processes.

Column 7 line 8-13, button 358 in Figure 3 allows the insertion of a sub-workflow or existing complex operation into a current workflow process.

Column 7 line 17-20, commonly used, previously defined workflows can be used in the definition of new workflow processes.

**a condition designer creating one or more workflow conditions based on one or more formulas, said conditions specified in one of the following ways: success, failure, a percentage of a success or a percentage of a failure;**

Column 8 line 45-49, rule engine creates one or more workflow conditions based on conditional clauses or formulas, including conditions which can be specified by success or failure.

Column 8 line 66 – column 9 line 1, for a particular condition clauses are all evaluated to determine if there are no more clauses, then the rule condition is evaluated as 'success' and the rule engine presents the routing information.

Art Unit: 3623

**an external process designer creating one or more external process workflow objects, said objects exchanging data with one or more sources in said network;**

Figure 2 #214 and #213, workflow builder and desktop creates an external process workflow object(s), as shown in Figure 2 #223 'object repository'.

Objects exchange data with one or more remote sources in network – column 3 line 62-65, in this example, a customer PO that is scanned is an object that then has an OCR performed on it – these objects may be remote in a network as shown by Figure 2 which illustrates the separation of the workflow design and administration steps with the rule engine #230 and object repository #223. These objects may also be internal or external to an organization.

**said system creating workflow processes using said workflow segment designer, subflow designer, condition designer and external process designer**

Column 2 line 19-30, system for generating and controlling workflows.

Figure 3 illustrates the system for creating workflow processes including workflow segment designer, subflow designer, and external process designer. Steps 313, 314, 315 and 316 are all workflow steps. 318 is a connection to an external process, in this case a database. The command 390 'workflow' allows the opening of subflows which are existing workflow processes (column 5 line 58-60).

Art Unit: 3623

Figure 4 illustrates the 'rules condition builder' for designing workflow conditions.

**and said system routing said one or more resources locally and remotely using said set of routing rules and said intelligent search engine,**

column 2 line 27-30, workflows include steps or routing objects retrieved from repository (see figure 2 #223 object repository can be local and remote through network #150).

Column 5 line 19-26, rule engine evaluates request (Figure 2 #230 and routes the request to a resource if request is valid according to rules in rules engine).

Chatterjee does not teach:

**a workflow analyzer analyzing in real-time said one or more workflow processes;**

**and said system analyzing, via said workflow analyzer, said created workflow process in real time to optimize workflow functionality.**

Aspen teaches:

**a workflow analyzer analyzing in real-time said one or more workflow processes;**

Page 2 paragraph 1 line 1-4, Aspen Engineering Suite allows company's to improve their business processes and workflows.

Page 2 paragraph 3 line 19-21, Aspen provides real time analysis and real time optimization of plant operations. Since real time optimization requires an objective function for determining a maxima or minima in real time, the calculations required by an analyzer to achieve real time optimization constitute real time analysis of the system at various points in order to converge to a real time optimization point.

**and said system analyzing, via said workflow analyzer, said created workflow process in real time to optimize workflow functionality.**

Page 1 paragraph 4 line 5-9, Aspen provides analysis and real time optimization of plant operations. Real time optimization requires the real time analysis of an objective function to determine where the function is in real time in respect to a maxima or a minima. A real time optimization provides a faster way to converge an objective function to an optimized point (maxima or minima).

Aspen teaches that the use of its software to provide real time analysis and optimization of business processes improves productivity and profitability through the automation of tasks (page 1 paragraph 2 line 11-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Chatterjee regarding workflow management systems to include a system providing real time analysis and optimization to optimize workflow functionality, as taught by Aspen, because

Art Unit: 3623

optimizing in real time ensures there is no delay in achieving an optimized process state.

Chatterjee and Aspen do not teach exchanging data with sources in the network that are external to the organization.

However, Official Notice is taken that it is old and well known in the art of networking for data to come from sources that are external to an organization. A good example of this are corporations which use objects in a network that exchange data with one or more sources from the internet. Being connected to and receiving data from the internet allows corporations to improve the efficiency of communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the collective teachings of Chatterjee and Aspen regarding providing workflow capabilities, to include the step of exchanging data with sources external to an organization in a network, because it would improve the efficiency of communication.

Regarding **Claim 4**, Chatterjee teaches

**wherein said system further comprises a requestor filter to restrict said routing based on identities of requestors triggering said workflow steps.**

Art Unit: 3623

Column 8 line 20-25, rule engine restricts resource routing based on a wide variety of conditions, including those based on identities of requestors.

Column 8 line 10-14, for example, a workbasket presents a rejected PO to specific users through the use of the rule engine that restricts routing based on identities of requestors triggering workflow steps.

Regarding **Claim 7**, Chatterjee teaches:

**wherein said formulas are interpreted using said intelligent search engine to determine appropriate workflow recipients for said one or more resources.**

Column 2 line 27-30, workflows include steps or routing objects retrieved from repository (see figure 2 #223 object repository can be local and remote through network #150).

Column 5 line 19-26, rule engine evaluates request (Figure 2 #230 and routes the request to a resource if request is valid according to rules in rules engine).

Regarding **Claim 9**, Chatterjee teaches:

**wherein said system further comprises a workflow administration manager setting the frequency and priority of said created workflow processes.**

Column 4 line 13-16, priority is set for a particular user when the script handler prompts a user for input when intermediate results are obtained.

Art Unit: 3623

Figure 3 #313 and 314, priority is set for workflow processes in the ordering of various steps, e.g. when step #313 occurs before step #314.

Column 3 line 52-54, administration manager sets up workbaskets, which are used by users of a workflow management system to control which task they work on (priority) and when (frequency).

Regarding **Claim 13**, Chatterjee teaches:

**wherein said network comprises any of the following:**

local area network (LAN), wide area network (WAN), HTTP network, world wide web, wireless network, PSTN/PBX network, or **Internet**.

Figure 2 #240 shows elements of workflow management system which communicate over a network, #150, using TCP/IP protocol, #240.

Regarding **Claim 15**, Chatterjee teaches:

**wherein said one or more resources to be routed are further updated by accessing a script library.**

Column 3 line 45-50, system includes a script handler with a rule library – see figure 2 #211—for updating resources. The script handler translates commands that are used by the system to access remote resources, including updating their status, whether they are busy or idle.

Column 4 line 51-53, script handler performs routing in complex operations, including resource routing and updating of resource status.

Art Unit: 3623

Regarding **Claim 16**, Chatterjee teaches:

**wherein said script library is an application programming interface (API) library.**

Figure 2 #250, Workforce Database (WFDB) API layer is shown which interacts with the script handler and rule engine library, #211. This construct allows for the workflow management system to access remote resources over the network #150..

**Claims 17, 20, 21, 24, 25 and 28** are rejected under the same rationale as **Claims 1, 4, 7, 9, 13, 15 and 16** above, therefore the same rejection applies.

7. **Claims 27 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chatterjee** US 5,774,661 in view of **Du** US 5,826,239.

Regarding **Claim 27**, Chatterjee teaches:

A workflow design area as discussed above in Claim 26 (Figure 3).

Chatterjee does not teach:

**a workflow object store comprising predefined workflow processes usable either as a new workflow process or as part of an existing workflow process**

Du teaches:



Art Unit: 3623

**a workflow object store comprising predefined workflow processes usable either as a new workflow process or as part of an existing workflow process.**

Column 10 line 31-36, business object library stores objects that can be assembled to form workflow processes. Business objects form the building blocks assembled to form workflow processes.

Figure 5 #94a-c, business objects stored in databases.

Official Notice is taken that it old and well known in the art to store software code, including objects, in repositories for later reuse. This is done to stimulate reuse and save time and cost in programming since the software code can be reused.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the collective teachings of Chatterjee and Aspen, as discussed above, with saving the workflow process in a database, as taught by Du, because it would save time and costs associated with creating new workflow processes.

**Claim 30** is rejected under the same rationale as **Claim 27** above, therefore the same rejection applies.

***Allowable Subject Matter***

8. **Claims 2, 3, 18 and 19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. **Claims 5, 6, 8 and 14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. **Claim 10** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. **Claims 11, 12, 22 and 23** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3623

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGS

JGS 10-21-05

*Susanna Diaz*  
SUSANNA M. DIAZ  
PRIMARY EXAMINER  
*AU 3623*